

NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

RAD 136 - CLINICAL INTERNSHIP IN MAGNETIC RESONANCE IMAGING (2 CR.)

COURSE DESCRIPTION

Develops technical skills in magnetic resonance procedures. Focuses on manipulation of equipment, patient care, and procedures. Clinical 10 hours per week.

GENERAL COURSE PURPOSE

This course is a component of a career certificate that is designed as a multi-competency module to provide expertise in magnetic resonance imaging to registered or registry eligible technologists. The completion of the career certificate will prepare individuals for employment as MRI technologists in hospitals and imaging centers. This course will fulfill the professional continuing education requirements required by the American Registry of Radiologic Technologists.

ENTRY LEVEL COMPETENCIES

This course is offered to students who have graduated from an approved radiologic technology program and are registered or registry eligible according to the standards provided by the American Registry of Radiologic Technologists.

COURSE OBJECTIVES

After completion of this course, the student will be able to:

- A. clean and prepare room for procedures
- B. obtain accurate histories through proper questioning
- C. assess the physical status of a patient during an examination
- D. recognize life threatening situations
- E. demonstrate an understanding of safety release and activation of the magnet at all times
- F. insure that no one with a pacemaker is allowed past the patient holding area
- G. screen all patients for metallic implants, devices, and foreign metallic objects
- H. explain MRI examination to the patient and answer proper questions
- I. practice aseptic and sterile techniques during IV procedures
- J. identify proper contrast agents for specific examinations
- K. properly calculate dose and administration route
- L. locate emergency cart
- M. demonstrate equipment operation correctly
- N. identify landmarks for patient positioning
- O. identify appropriate coils for each procedure
- P. perform QA procedures and explain rationale
- Q. enter correct data on scanner and select proper imaging protocols for each anatomical area
- R. load magnetic tape, archive image and restore images from tape
- S. select correct film format and adjust window level for filming

- T. demonstrate proper loading and unloading, processing and duplicating film
- U. assist radiologist in sedation of patients and monitor after sedation
- V. perform frequency tuning
- W. locate major components in computer room
- X. identify cryogenics and their use. Identify risk factors
- Y. locate UPS, fire alarm and extinguisher
- Z. perform procedures for the following studies:
 - 1. head with/without contrast
 - 2. vertebral column with/without contrast
 - 3. spine
 - 4. thorax
 - 5. abdomen
 - 6. pelvis
 - 7. chest
 - 8. knee
 - 9. foot
 - 10. ankle
 - 11. wrist
 - 12. shoulder

MAJOR TOPICS TO BE INCLUDED

This course will focus on patient care, imaging procedures and instrumentation in magnetic resonance Imaging.